

# **Cruzane Mountain**

## **Socio-Economic Specialist Report**

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For:

Superior Ranger District

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DRAFT

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## **Introduction**

The management of the natural resources on the Lolo National Forest (LNF) has the potential to affect local economies. People and economies are an important part of the ecosystem. Use of resources and recreational visitation to the national forests generate employment and income in the surrounding communities and counties, and generate revenues returned to the Federal treasury or used to fund additional on-the-ground activities to accomplish resource management objectives.

This report delineates the affected area, assesses potential environmental justice impacts, and outlines methods and results of analyzing the economic effects of the Cruzane Mountain project, including the project feasibility, financial efficiency, and economic impacts. Project feasibility and financial efficiency relate to the costs and revenues of doing the action. Economic impacts relate to how the action affects the local economy in the surrounding area.

When reading this report, one needs to keep in mind the difference between the entire project and the timber sale portion of the project. This project may include multiple commercial timber sales as well as non-commercial activities. All activities would have both market (financial) and non-market costs and benefits associated with them. The non-market aspects of each proposed activity are described in other resource sections of the EA and the respective specialist reports.

## **Regulatory Environment**

The preparation of NEPA documents is guided by CEQ regulations for implementing NEPA [40 CFR 1500-1508]. NEPA requires that consequences to the human environment be analyzed and disclosed. The extent to which these environmental factors are analyzed and discussed is related to the nature of public comments received during scoping. NEPA does not require a monetary benefit-cost analysis. If an agency prepares an economic efficiency analysis, then one must be prepared and displayed for all alternatives [40 CFR 1502.23].

OMB Circular A-94 promotes efficient resource use through well-informed decision making by the Federal Government. It suggests agencies prepare an efficiency analysis as part of project decision making and prescribes “present net value” as the criterion for the efficiency analysis.

The development of timber sale programs and individual timber sales is guided by agency direction found in Forest Service Manual (FSM) 2430. Forest Service Handbook (FSH) 2409.18 guides the financial and, if applicable, economic efficiency analysis for timber sales.

Many of the costs and benefits associated with a project are not quantifiable in financial terms. For example, the benefit to wildlife from habitat improvement from a project is not quantifiable in financial terms. These costs and benefits are described qualitatively in the indicated resource sections of the Environmental Assessment. Title 40, Code of Federal Regulations for NEPA (40 CFR 1502.23) indicates:

*For the purposes of complying with the Act, the weighing of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are qualitative considerations.*

Executive Order 12898, issued in 1994 orders Federal Agencies to identify and address any adverse human health and environmental effects of agency programs that disproportionately impact minority and low-income populations. The Order also directs agencies to consider patterns of subsistence hunting and fishing when an agency action may affect fish or wildlife.

The Civil Rights Act of 1964 provides for nondiscrimination in voting, public accommodations, public facilities, public education, federally assisted programs, and equal employment opportunity. Title VI of the Act, Nondiscrimination in Federally Assisted Programs, as amended (42 U.S.C. 2000d through 2000d-6) prohibits discrimination based on race, color, or national origin.

Additionally, the Lolo Forest Plan includes the following forest-wide goals and standards pertinent to economics:

- Provide a sustained yield of timber and other outputs at a level that will support the economic structure of the local communities and provide for regional and national need. (USDA, Forest Service 1986, Lolo National Forest Plan, Page II-1)
- Timber outputs would be provided while maintaining indigenous wildlife habitat, protecting threatened and endangered species, and providing for dispersed recreation opportunities, and diverse ecosystems. Forest-wide standard 11 requires an economic analysis for timber sales larger than one million board feet, considering net public benefit and/or probable marketability at several stages of project planning (USDA, Forest Service 1986, Lolo National Forest Plan, page II-11).

### **Analysis Area and Affected Environment**

The Cruzane Mountain Project is located on the Superior Ranger District of the LNF within Mineral County, Montana. Sanders and Mineral counties are the two counties that would be most affected by the project in terms of social and economic effects, and the Affected Environment section focuses on these two counties (County Region). This affected area or zone of influence ascribed to the Cruzane Mountain Project is based mainly on information from the Bureau of Business and Economic Research (BBER) at the University of Montana (McIver et. al 2012).

Socioeconomic measures used to describe the affected environment were obtained from the Headwaters Economics Economic Profile System (EPS 2019), which compiles and summarizes primary demographic and economic data from a variety of government sources into a report. Key measures used in this report include land ownership, population, income, natural resource commodity dependency and economic diversity.

### **Land Ownership**

Decisions made by public land managers may influence the local economy and lifestyles of residents, particularly if public lands represent a large portion of the land base. Agency management actions that may affect water quality, access to recreation, scenery (as well as other quality of life amenities), and the extent and type of resource extraction are particularly important in areas where much of the land is managed by public agencies.

The vast majority of the land area within these two counties is managed by various public agencies. Of the 2,568,540 acres in Sanders and Mineral County only 354,924 acres are privately owned. Federally managed lands are 1,568,799 acres, or 61.1 percent for the two-county area. Mineral County has the largest share of Federal lands in the state (81.7 percent). By comparison, only 27.5 percent of the land area of the United States is publicly owned (Figure 1).

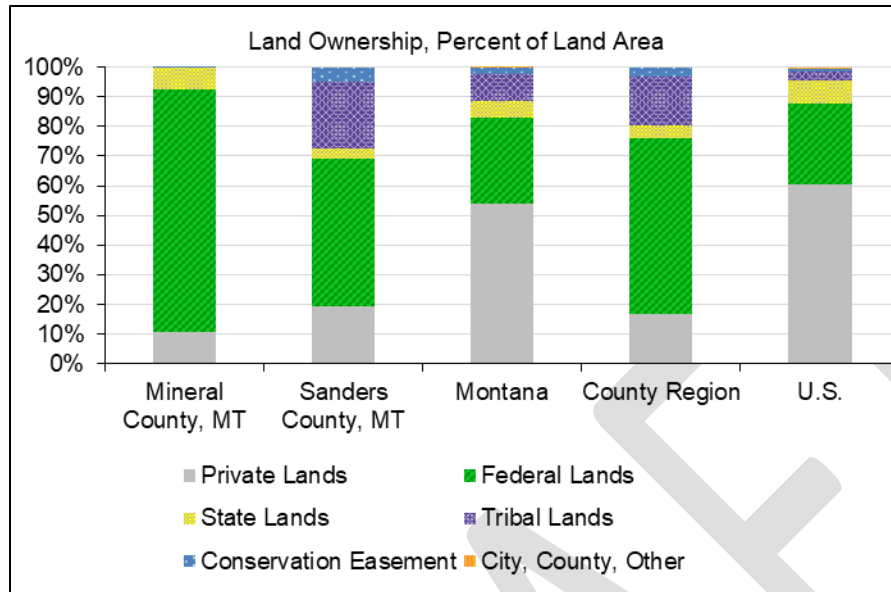


Figure 1: Land ownership Percent of Land Area

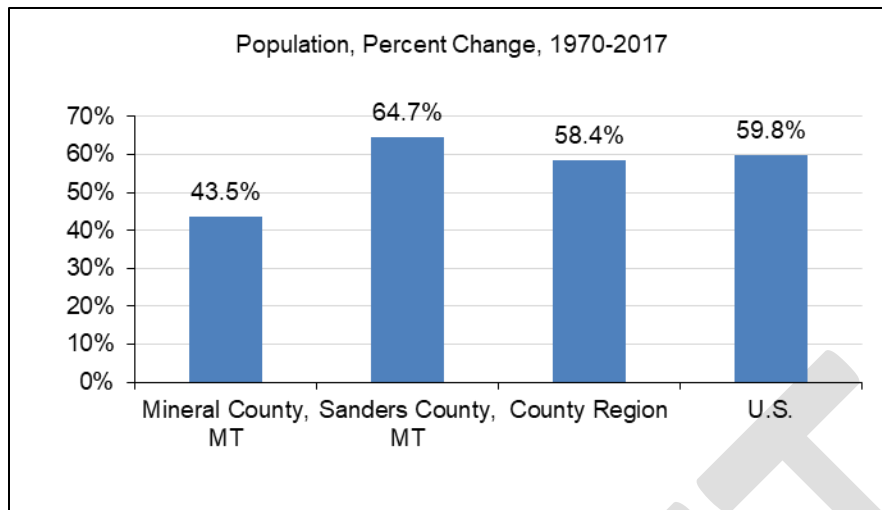
### **Population, Employment, and Income**

One measure of economic performance is whether a geography is growing or declining. Standard measures of growth and decline are population, employment, and real personal income.

The information in this section helps to understand whether geographies are growing or declining at different rates, and makes it easy to see if there are discrepancies between changes in population, employment, and real personal income. If population and employment are growing faster than real personal income, for example, it may be worthwhile to do further research on whether this is because growth has been in low-wage industries and occupations. Alternatively, if personal income is growing faster than employment, it may be because of growth in high-wage industries and occupations and/or non-labor income sources.

#### **Population**

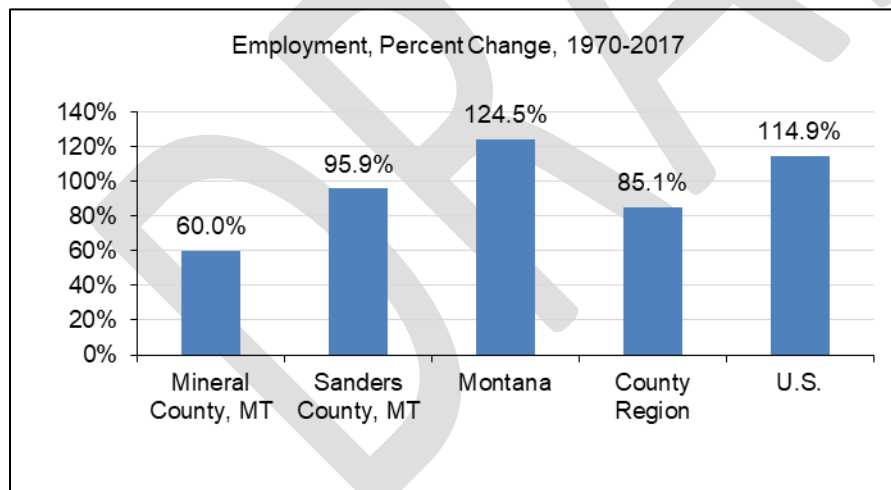
From 1970 to 2017, the population in the County Region impact area grew by 58.4 percent, led by 64.7 percent population growth in Sanders County. Mineral County had the lowest population growth, at 43.5 percent over the period. This compares to US population growth of 59.8 percent (Figure 2).



**Figure 2: Population Percent Change, 1970-2017**

### Employment

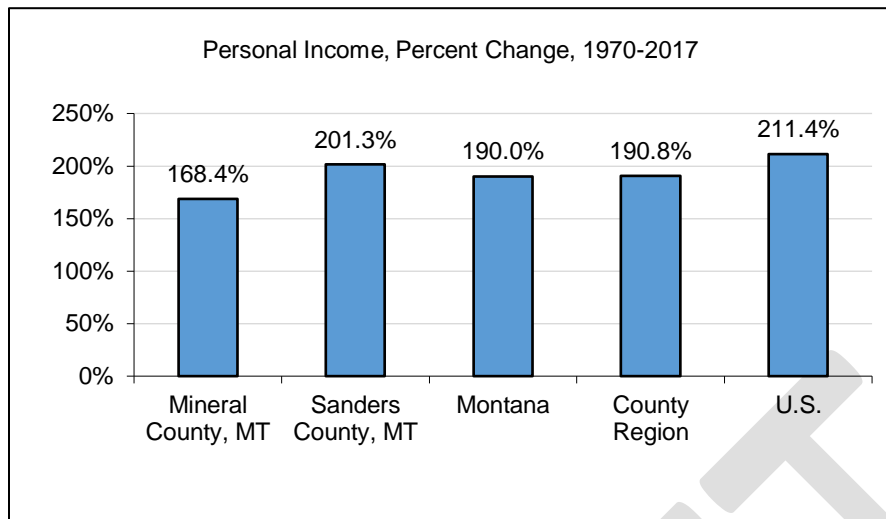
Employment in the County Region impact area increased by 85.1 percent over the period of 1970-2017. The employment increases in both Mineral County (60.0 percent) and Sanders County (95.9 percent) were lower than the employment increases in both Montana (124.5 percent) and the U.S. (114.9 percent) over the same time period (Figure 3).



**Figure 3: Employment Percent Change, 1970-2017**

### Personal Income

Personal income in the County Region impact area increased by 190.8 percent over the period of 1970-2017. The personal income increases in both Mineral County (168.4 percent) and Sanders County (201.3 percent) were lower than the U.S. personal income change (211.4 percent) over the same time period (Figure 4).

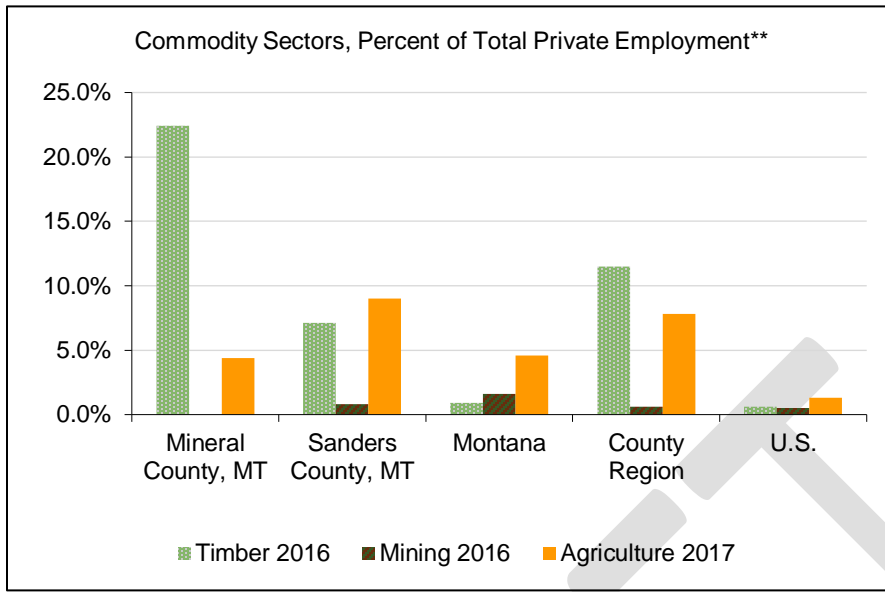


**Figure 4: Personal Income Percent Change, 1970-2017**

Commodity sectors are industrial sectors that have the potential to use Federal public lands for the extraction of commodities. Commodity sectors include timber, mining (including oil, gas, and coal), and agriculture. Public lands can play a key role in stimulating local employment by providing opportunities for commodity extraction. It is important to understand the relative size of these sectors to put the economy related to commodity extraction in perspective. For example, a county with the majority of its employment in the commodity sectors has a higher chance of being impacted by decisions that permit (or restrict) timber, mining, and grazing activities on public lands than a county with very small percentage of the workforce is in these sectors.

In 2016, timber was the largest component of commodity sector employment in the impact area, averaging 14.8 percent of total employment across Sanders and Mineral counties, followed by agriculture (2017 data) at 6.7 percent of total employment (Figure 5). In comparison, timber accounted for 0.6 percent of the Nation's jobs, while agriculture accounted for 1.3 percent.





*Figure 5: Commodity Sectors, Percent of Total Employment*

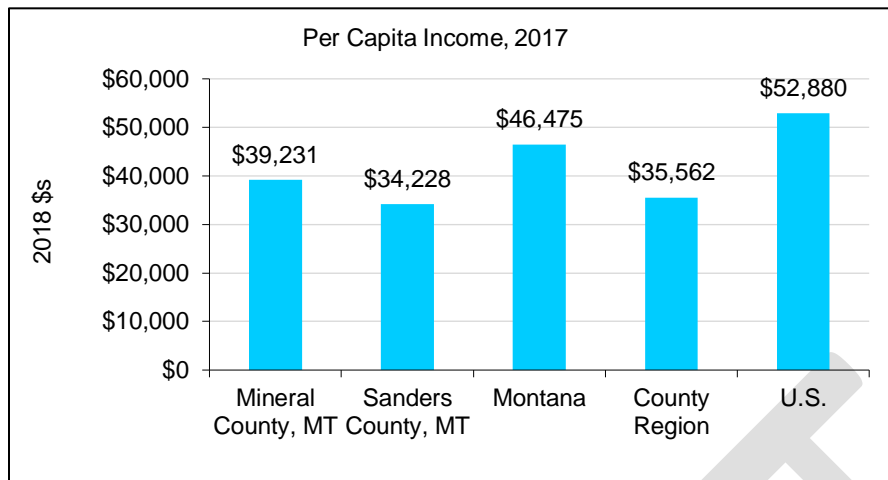
### Income

Average earnings per job, unemployment rate, and per capita income are three important indicators of economic well-being.

Labor income and total personal income are often used as proxies for standard of living. To understand the data on earnings and income, it is important to understand the different types of income. Earnings per job (or average earnings) is the sum of wage and salary disbursements plus other labor and proprietors' income for the area of interest (county or aggregation of counties), divided by total full-time and part-time employment for the area of interest. Average earnings per job is an indicator of the quality of local employment, with a higher average earnings per job indicating that there are relatively more high-wage occupations.

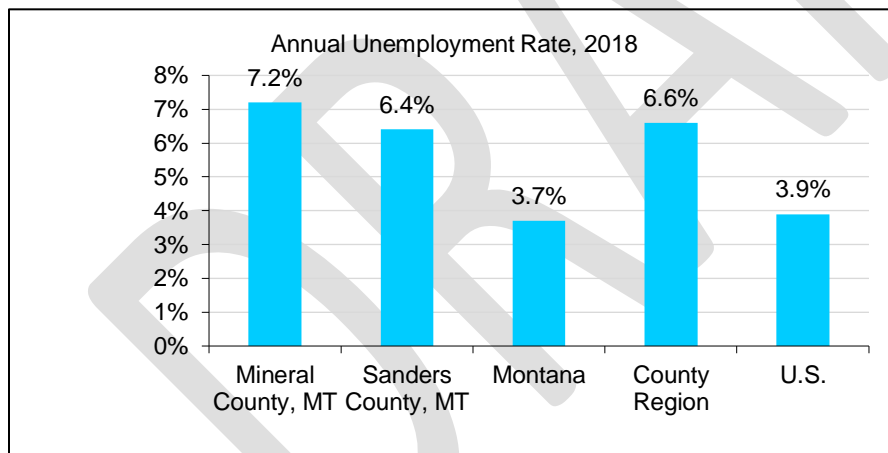
Per capita income is the sum of total personal income for the area of interest divided by the sum of total population in the area. Per capita income is considered one of the most important measures of economic well-being. However, this measure can be misleading. Because total personal income includes non-labor income sources (dividends, interest, rent and transfer payments), it is possible for per capita income to be relatively high due to the presence of retirees and people with investment income. Additionally, because per capita income is calculated using total population as the denominator and not the labor force as in average earnings per job, it is possible for per capita income to be relatively low when there are a disproportionate number of children and/or elderly people in the population.

In 2017, per capita income in the County Region impact area was \$35,562 per year, compared to an average of \$52,880 in the U.S. Of the counties in the impact area, Sanders County had the lowest per Capita income at \$34,228. Both counties in the impact area had lower per capita income than the state (\$46,475) and the national average (\$52,880) (Figure 6).



*Figure 6: Per Capita Income, 2017*

The annual unemployment rate (Figure 7) is the number of people actively seeking but not finding work, as a percent of the labor force. This figure can go up during national recessions and/or when more localized economies are affected by area downturns. There can be significant seasonal variations in unemployment, which can be viewed by looking at seasonally unadjusted unemployment rates.



*Figure 7: Annual Employment Rate, 2018*

## Social Environment

The Lolo Forest Plan EIS (USDA Forest Service 1986) includes information about the social environment of the analysis area (i.e., the lifestyles and attitudes toward forest resources and the way these resources are used).

Local residents continue to pursue a wide variety of life-styles, but may share a common theme—an orientation to the outdoors and natural resources. The communities are closely tied to the National Forest in work, subsistence, and recreation and are directly affected by what happens on the National Forest.

National and regional trends in industry sectors influence the ability of communities to adapt to changing circumstances. Timber being the largest commodity in the affected area, timber employment has declined from 14.68 percent in 1998 to 11.5 percent in 2016 (EPS 2019). While the National Forest System (NFS) timber sale program has experienced many changes over the last two decades, the associated logging and restoration activities remain integral to local communities in terms of employment and social sustainability.

The economy in Mineral and Sanders Counties continues to depend heavily on natural resources, especially timber (Figure 5).

## **Environmental Consequences**

### ***Methodology***

The economic measures used for this report are project feasibility, financial efficiency, economic impacts, and environmental justice. These measures, including methodologies, are described below.

### ***Project Feasibility***

*Project feasibility* is used to determine if a project is feasible, that is, is it expected to sell, given current market conditions. The determination of feasibility relies on a residual value (stumpage = revenues - costs) feasibility analysis that uses local delivered log prices and stump to mill costs to determine if a project is feasible. The appraised stumpage rate from this analysis is compared to the base rate (which is the lowest rate for which the Forest Service may sell timber). The project is considered to be feasible if the appraised stumpage rate exceeds the base rates. If the feasibility analysis indicates that the project is not feasible, the project may need to be modified. Infeasibility indicates an increased risk that the project may not attract bids and may not be implemented.

### ***Financial Efficiency***

*Financial efficiency* provides information relevant to the future financial position of the program if the project is implemented. Financial efficiency considers anticipated costs and revenues that are part of Forest Service monetary transactions. Present net value (PNV) is used as an indicator of financial efficiency and presents one measure to be used in conjunction with many other factors in the decision-making process. PNV combines benefits and costs that occur at different times and discounts them into an amount that is equivalent to all economic activity in a single year. A positive PNV indicates that the alternative is financially efficient.

Costs for restoration activities are based on recent experienced costs and professional estimates. Non-harvest related costs are included in the PNV analysis, but they are not included in appraised timber value. Costs for sale preparation, sale administration and fuel treatments are included. The NEPA planning costs are sunk costs at the time of decision and are not included in the PNV analysis.

Financial efficiency analysis is not intended to be a comprehensive analysis that incorporates monetary expressions of all known market and non-market benefits and costs. Many of the values associated with natural resource management are best handled apart from, but in conjunction with, a more limited financial efficiency framework. These non-market benefits and costs associated with the project are discussed throughout the various resource sections of the Environmental Assessment.

### ***Economic Impacts (Jobs and Labor Income)***

Economic impacts are used to evaluate potential direct, indirect, and cumulative effects on the economy. Economic impacts are estimated using input-output analysis. Input-output analysis is a means of examining relationships within an economy, both between businesses and between businesses and final consumers. It captures all monetary market transactions for consumption in a given time period. The

resulting mathematical representation allows one to examine the effect of a change in one or several economic activities on an entire economy, all else constant. This examination is called impact analysis. The IMPLAN modeling system allows the user to build regional economic models of one or more counties for a particular year. The model for this analysis used the 2015 IMPLAN data in conjunction with response coefficients that relate timber harvest quantity to direct jobs and income (Sorenson et al. 2016). IMPLAN translates changes in final demand for goods and services into resulting changes in economic effects, such as labor income and employment of the affected area's economy.

The economic impact effects are measured by estimating the direct jobs and labor income generated by (1) processing the timber volume from the project, and (2) Forest Service expenditures for contracted restoration activities included as part of the proposed treatments. The direct employment and labor income benefit employees and their families and, therefore, directly affect the local economy. Additional indirect and induced multiplier effects (ripple effects) are generated by the direct activities. Indirect effects are felt by the producers of materials used by the directly affected industries. Induced effects occur when employees of the directly and indirectly affected industries spend the wages they receive. Together, the direct and multiplier effects comprise the total economic impacts to the local economy.

Data used to estimate the direct effects from the timber harvesting and processing were provided by the University of Montana's Bureau of Business and Economic Research (BBER) (Sorenson et al. 2016). This national dataset is broken into multi-state regions and is considered more accurate than that which is available from IMPLAN. The Northern Rockies BBER Region (Montana and Idaho) is used for this analysis. The BBER data represents the results of mill censuses that correlate production, employment, and labor income. The economic impact area for this analysis consists of Sanders and Mineral County. Potential limitations of these estimates are the time lag in IMPLAN and the uncertainty of where the timber will ultimately be processed. The analysis assumes the harvested timber volume Sanders and Mineral County impact area for the project. However, if some of the timber were processed outside the region, then a portion of the jobs and income would be lost by this regional economy.

### ***Environmental Justice***

As stated in Executive Order 12898, it is required that all federal actions consider the potential of disproportionate effects on minority and low-income populations in the local region. The principals of environmental justice require agencies to address the equity and fairness implications associated with Federal land management actions. The Council on Environmental Quality (CEQ) (1997) provides the following definitions in order to provide guidance with the compliance of environmental justice requirements:

“Minority population: Minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis...”

“Low-income population: Low-income populations in an affected area should be identified with the annual statistical poverty thresholds from the Bureau of the Census' Current Population Reports, Series P-60 on Income and Poverty. In identifying low-income populations, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions of environmental exposure or effect.”

## **Effects Analysis**

The analysis area for the efficiency analysis is the project area. The Cruzane Mountain Project area is approximately 28,235 acres in size and is located northeast of Saltese, Montana. The project area is within Mineral County. The project area boundary on the south is the Interstate 90 and to the east and to the west is a mix of State of Montana and private lands. The project includes parts of the East Fork of Packer Creek, Timber Creek and Manus Creek.

Timber management activities within the project area have the potential to impact the economic conditions of local communities. To estimate the potential effect on jobs and income, a zone of influence (or economic impact area) was delineated. The impact area was chosen based on commuting data suggesting a functioning economy and where the timber is likely to be processed (log flows) (METI Corp 2010). This analysis suggested that Mineral and Sanders Counties were the appropriate counties to include in the economic impact analysis area.

## **No Action Alternative**

The No Action alternative would not harvest timber, implement BMPs on haul routes, or take other restorative actions and, therefore, incurs no financial costs. It would also produce no revenue and have no effects on jobs or income. The public would not incur costs, nor realize benefits of timber harvest in this area. However, the NEPA planning cost for this alternative will have already been incurred, representing a sunk cost.

The No Action alternative has the potential to continue the decline of timber-related employment in the rural communities of the economic impact area. Continued decline in timber harvest from National Forest System lands could potentially impact wood product employment and associated indirect and induced employment. Cumulative loss in timber-related jobs could affect the remaining infrastructure and capacity of the local rural communities, and could disrupt the dependent local goods and service industries.

## **Proposed Action**

### **Project Feasibility**

The estimation of project feasibility was based on the Region 1 sale feasibility model, which is a residual value timber appraisal approach that takes into account logging system, timber species and quality, volume removed per acre, lumber market trends, costs for slash treatment, and the cost of specified roads, temporary roads and road maintenance. The appraised stumpage rate from the feasibility analysis was compared to base rates. In this case the minimum rate of \$19.49 per hundred cubic feet (CCF) was used. The appraised stumpage rate and base (minimum) rates for each alternative are displayed in Table 1. For the proposed action, the appraised stumpage rates are slightly higher than the base rate, indicating that the proposed action is feasible (likely to sell).

**Table 1. Project Feasibility and Financial Efficiency Summary (2017 dollars)**

Category	Measure	No Action Alternative	Proposed Action
Timber Harvest Information	Acres Harvested	0	1,411
	Volume Harvested (CCF)	0	22,715
	Base Rates (\$/CCF)	\$0	\$11.37
	Appraised Stumpage Rate (\$/CCF)	\$0	\$19.49
	Predicted High Bid (\$/CCF)	\$0	\$25.14
	Total Revenue (Thousands of \$)	\$0	\$571
Timber Harvest & Required Design Criteria	PNV (Thousands of \$)	\$0	\$72
Timber Harvest & All Other Resource Activities	PNV (Thousands of \$)	\$0	-\$210

### Financial Efficiency

The financial efficiency analysis is specific to the timber harvest and restoration activities associated with the alternatives (as directed in Forest Service Manual 2400-Timber Management and guidance found in Forest Service Handbook 2409.18). Costs for sale preparation, sale administration, regeneration, and restoration activities are included. All unit costs, quantities, and timing of activities were developed by the specialists on the project's interdisciplinary team. If exact costs were not known, the maximum of the cost range was used to produce the most conservative PNV result. If actual costs are lower, all else equal, PNV would be higher than the estimates for the proposed action in Table 1. The expected revenue for each alternative is the corresponding predicted high bid from the sale feasibility analysis, multiplied by the quantity of timber to be harvested. The predicted high bid is used for the expected revenue (rather than the appraised stumpage rate) since the predicted high bid is the best estimate of the high bid resulting from the timber sale auction. The PNV was calculated using a 4% real discount rate over the seven-year project lifespan (2019-2026). For more information on the values or costs, see the project file.

This analysis is not intended to be a comprehensive benefit-cost or PNV analysis that incorporates a monetary expression of all known market and non-market benefits and costs that is generally used when economic efficiency is the sole or primary criterion upon which a decision is made. Many of the values associated with natural resource management are best handled apart from, but in conjunction with, a more limited benefit-cost framework. These values are discussed throughout the Environmental Assessment, for each resource area.

Table 1 summarizes project feasibility and financial efficiency, including the base rates, appraised stumpage rate, predicted high bid, total revenue, and PNV for each alternative. Because not all costs of the project are related to the timber sales, two PNVs were calculated. One PNV indicates the financial efficiency of each alternative, including all costs and revenues associated with the timber harvest and required design criteria. A second PNV includes all costs for each alternative with the required design criteria and for the timber harvest and all other resource activities. The costs of other resource activities used in the PNV calculations can be found in Table 2 with the exception of sale preparation costs of \$12.50 per CCF and sale administration costs of \$8.50 per CCF. However, the cost of sale preparation and sale administration are considered in PNV for the proposed action.

Results shown in Table 1 indicate that the proposed action is financially efficient (positive PNVs) for the timber harvest with designed criteria. However, the proposed action is financially inefficient (negative PNV) when the other resource activities are added to the timber harvest, indicating that those activities will need to be funded outside of the timber sale. The other resource activities that influence this calculation are summarized in Table 2. The No Action alternative has no costs or revenues associated with it.

A reduction of PNV in any alternative as compared to the most efficient solution is a component of the economic trade-off, or opportunity cost, of achieving that alternative. The no action alternative would not harvest or take other restorative actions and, therefore, would incur no costs. As indicated earlier, many of the values associated with natural resource management are non-market benefits. These benefits should be considered in conjunction with the financial efficiency information presented here. These non-market values are discussed in the various resource sections found in this the environmental assessment.

When evaluating trade-offs, the use of efficiency measures is one tool used by the decision maker in making the decision. Many things cannot be quantified, such as safety, effects on wildlife and the restoration of watersheds and vegetation. The decision maker takes many factors into account in making the decision.

### Other Resource Activities and Appropriated Dollar Activities

Table 2 displays the other resource activities not associated with the commercial harvest, and thus not included in the appraisal. These activities will occur as funding becomes available. These activities associated with this project are weed spraying, non-commercial thinning, fuel break construction with piling and burning of fuels and prescribed fire in non-commercial areas. The cost for activities listed below are based on recent experienced cost and professional estimates. Other Resource Activity costs are included in the PNV calculation for Timber Harvest And other Resource Activity, but they are not included in the PNV calculation for Timber Harvest and Required Design Criteria (Table 1).

**Table 2: Other Resource Activity Costs**

	No Action Alternative	Proposed Action
	Total Cost	Total Cost
Weed Spraying	\$0.00	\$3,825
Non-commercial thinning	\$0.00	\$11,550
Fuel breaks and piling and burning of fuels	\$0.00	\$35,000
Prescribed fire in non-commercial areas	\$0.00	\$332,200
<b>Total Costs</b>	<b>\$0.00</b>	<b>\$382,525</b>

### Economic Impact Effects

This analysis calculated the jobs and labor income associated with the processing of the timber products harvested and conducting other resource activities not tied to commercial sales. Timber products harvested from the proposed project and the non-timber activities would have direct, indirect, and induced effects on local jobs and labor income. To estimate jobs and labor income associated with timber harvest, this analysis assumed only sawtimber would be harvested from this project. In order to estimate jobs and labor income associated with reforestation and restoration activities, expenditures for these activities were developed by resource specialists experienced with each type of activity. Only the expenditures associated with the contracted activities are included in the impact analysis.

A job (as defined in IMPLAN) is an annual average of monthly jobs. This is a standard convention and consistent with methods used by the U.S. Bureau of Labor Statistics. When jobs are counted this way, one cannot tell from the data the number of hours worked or the proportion that are full or part-time or anything about seasonality; only that they are yearlong. These jobs are different than full time equivalent (FTE) jobs.

Table 3 displays the direct, indirect and induced, and total estimates for employment (part and full-time) and labor income that may be attributed to each alternative. Since the expenditures occur over time, the estimated impacts of jobs and labor income would be spread out over the life of the project. It is important

to note that these may not be new jobs or income, but rather jobs and income that are supported by this project. These impacts are shown both in total (over the life of the project) and on an annual basis. It is anticipated that the timber harvest would occur over a five-year period, with the other resource activities spread out over four years after timber harvest. This means that the impact of timber harvest to jobs and labor income would occur prior to impact of jobs and labor income associated with other resource activities. However, implementation could take longer than anticipated due to unforeseen circumstances.

The No Action alternative maintains no jobs nor income because there are no activities associated with this alternative, therefore the proposed action generates more jobs and labor income than the no action alternative for timber harvest.

**Table 3. Economic Impacts (Employment and Labor Income), Total and Annual in 2017 dollars**

	Alternatives		
	Proposed Action		No Action
Non-Timber Activities			
Part and Full Time Jobs Contributed	Total	Annual	Total
Direct	3	1	0
Indirect and Induced	1	0	0
Total	4	1	0
Labor Income Contributed (Thousands of 2017 \$)			
Direct	\$117	\$20	\$0
Indirect and Induced	\$36	\$6	\$0
Total	\$154	\$26	\$0
Timber Harvest			
Part and Full Time Jobs Contributed	Total	Annual	Total
Direct	58	12	0
Indirect and Induced	81	16	0
Total	139	28	0
Labor Income Contributed (Thousands of 2017 \$)			
Direct	\$2,812	\$562	\$0
Indirect and Induced	\$2,969	\$594	\$0
Total	\$5,781	\$1,156	\$0
All Activities			
Part and Full Time Jobs Contributed	Total	Annual	Total
Direct	61	12	0
Indirect and Induced	82	16	0
Total	143	28	0
Labor Income Contributed (Thousands of 2017 \$)			
Direct	\$2,929	\$582	\$0
Indirect and Induced	\$3,005	\$600	\$0
Total	\$5,934	\$1,182	\$0



## Environmental Justice

The CEQ's Environmental Justice Guidelines for NEPA (1997), "minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis."

Table 4 shows that the total share of all minority populations represented less than 10 percent of the population within each county, the combined county affected area, as well as in the state. Thus, the U.S. Census data suggest minority populations within the analysis area do not meet the CEQ's Environmental Justice criterion.

*Table 4. Population by Race, 2017*

Percent of Total	Mineral	Sanders	Montana	County
White alone	97.6%	92.1%	89.0%	93.5%
Black or African American alone	0.2%	0.1%	0.4%	0.1%
American Indian alone	0.3%	3.6%	6.5%	2.8%
Asian alone	0.2%	0.5%	0.7%	0.6%
Native Hawaiian & Other Pacific Is. alone	0.0%	0.0%	0.1%	0.0%
Some other race alone	0.2%	0.3%	0.5%	0.2%
Two or more races	0.1%	3.4%	2.8%	2.7%

Poverty is an important indicator of economic well-being. For public land managers, understanding the extent of poverty is important for several reasons. First, people with limited income may have different needs, values, and attitudes as they relate to public lands. Second, proposed activities on public lands may need to be analyzed in the context of whether people who are economically disadvantaged could experience disproportionately high and adverse effects.

Poverty rates are often reported in aggregate, which can hide important differences. Table 5 shows poverty for various types of individuals and families. This is important because aggregate poverty rates (for example, families below poverty) may hide some important information (for example, the poverty rate for single mothers with children).

CEQ guidance on identifying low-income populations states that "...agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a set of individuals (e.g., migrant workers or Native Americans), where either type of group experiences common conditions of environmental exposure or effect." Low-income populations are defined, based on the 2016 Census standard, as persons living below the poverty level (based on total income of \$24,300 for a family household of four). Persistent poverty status requires a county to have experienced an individual poverty rate in excess of 20 percent for several Census years. From 2011-2015, 20.9 percent of the population of the County Region affected were living below the poverty level. Sanders County alone from 2011-2015 had 21.2 percent of the population living below the poverty level while Mineral County had 20.1 percent of population living below the poverty level. Based on this data, the characteristic of persistent poverty is present across the whole analysis area (Table 5). This project is not expected to have any negative economic effects on the population within the affected area.

The Executive Order (Executive Order (E.O.) 12898 - Federal Actions to Address Environmental Justice) also directs agencies to consider patterns of subsistence hunting and fishing when an action proposed by an agency has the potential to affect fish or wildlife. The project is not expected to negatively impact wildlife species traditionally depended on for subsistence hunting/fishing activities (see Wildlife section).

**Table 5. Poverty, 2017**

	Mineral County	Sanders County	Montana	County Region
<b>Percent of Total</b>				
People Below Poverty	20.1%	21.2%	14.4%	20.9%
Families Below Poverty	13.6%	14.8%	9.1%	14.5%
* The data in this table are calculated by ACS using annual surveys conducted during 2011-2015 and are representative of average characteristics during this period.				

## **Summary of Effects**

### **No Action Alternative**

Under the No Action alternative, no timber harvest, vegetation treatments, recreation improvements, aquatic restoration, weed treatments, nor any other restoration activities would occur in the project area in the foreseeable future. The public would incur no costs, nor realize any benefits of timber harvest or other project activities in this area. There also would be no return on the planning cost already incurred.

The No Action alternative has the potential to continue the decline of timber-related employment in the rural communities of the economic impact area. Continued decline in timber harvest from National Forest System lands could potentially impact wood product employment and associated indirect and induced employment. A 2009 report by Spelter, McKeever and Toth states many of the forests in the West are publicly owned, and supply from these lands have contracted (decreased) because of changes in management practices and conservation policies. Since January of 2007, twenty six sawmills have experienced permanent closure. Most negatively affected were the states of Montana and California, whose losses in this period (2007-2009) were 26% and 25% respectively (Spelter, McKeever and Toth, 2009). Between 2004 and 2009 six large mills and numerous small mills in Montana closed permanently. The January 2010 closure of the Smurfit-Stone Container linerboard facility in Frenchtown cost the state's forest products industry its largest single employer and largest user of wood fiber. Operations at most other facilities were curtailed in 2009 and 2010. Timber processing capacity dropped from 934 MMBF in 2004 to 606 MMBF in 2009. Capacity utilization, which normally exceeds 70 percent, dropped to 50 percent in 2009 (McIver, et al 2013). A 2015 Forest Products Outlook reports state that their 2014 survey that log supply has affected milling facilities across the state in 2014 and will continue into 2015 (Morgan et al 2015). Cumulative loss in timber-related jobs could affect the remaining infrastructure and capacity of the local rural communities, and could disrupt the dependent local goods and service industries.

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## **Proposed Action**

Implementation of the above proposed action alternative will harvest some timber and provide some revenue and would expend government funds to conduct restoration work. Table 1 displays a comparison of the predicted high bids, predicted revenue and estimated PNVs for each alternative which is the discounted version of the financial total revenue and costs over the life of the project, when the commercial and non-commercial activities are combined. The cost of the activities not related to timber harvest activities are summarized on Table 2. For all action alternatives the sale of timber in this project will recover the economic value of forest products in a timely manner to contribute to employment and income in local communities. The action alternatives will also reduce hazards threatening human health and safety as well as re-establish forested conditions and/or facilitate to meet management objectives outlined in the Forest Plan.

These action alternatives would also support existing jobs through timber harvest-related and other resource activities. The alternatives are compared in Table 3 in terms of jobs and labor income, jobs affected by the timber harvest and jobs affected by the other resource activities. If timber products other than sawlogs such as posts, poles, firewood, and/or house logs were harvested from these units, some additional employment and labor income would be contributed.

## **Cumulative Effects**

Management of the Lolo National Forest has an impact on the economies of local counties. However, there are many additional factors that influence and affect the local economies, including changes to industry technologies, management of adjacent National Forests and private lands, economic growth and international trade. The project would provide a variety of opportunities for contracts that may contribute to the local economy and have the potential to attract new business and residents and retain existing businesses and residents.

In addition, there are other foreseeable future Forest Service projects within Mineral County and counties closest to the project area that are in various stages of planning that potentially may add to the Forest's annual timber offerings during the time of implementation of the project. These ongoing and foreseeable projects are expected to add cumulatively to the employment and income of the economic impact area within the life of the Redd Bull project.

## **Forest Plan Consistency**

Consistent with the Forest Plan, an economic analysis has been completed that includes the probable marketability (i.e. economic feasibility) of the commercial timber harvest portion of the project (Forest Plan standard 11, page II-11). The project also contributes to one of the Forest Plan's goals to provide a sustained yield of timber and other outputs at a level that will help to support the economic structure of local communities (Forest Plan, page II-1).

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